MINUTES OF DOT-AGC BRIDGE DESIGN SUBCOMMITTEE MEETING

The DOT-AGC Joint Bridge Design Subcommittee met on June 18th, 2008. Those in attendance were:

Greg Perfetti	State Bridge Design Engineer (Co-Chairman)
Mike Robinson	State Bridge Construction Engineer
Randall Gattis	Sanford Contractors
George White	Blythe Construction
Chris Britton	Taylor & Murphy Construction Co.
Bryan Long	Dane Construction, Inc.
Allen Raynor	Asst. State Bridge Design Engineer
Brian Hanks	Structure Design Project Engineer
Paul Lambert	Structure Design Project Engineer
Scott Hidden	Support Services Supervisor – Geotech. Eng. Unit
Chris Kreider	Regional Operations Engineer – Geotech. Eng. Unit
Gichuru Muchane	Structure Design Engineer
Owen Cordle	Physical Testing Engineer – Materials & Tests Unit
Marsha Sample	Contract Time Engineer – Project Services Unit
Andy Gay	Specifications & Proposals Engineer – Project Services Unit

During the review of the April 16th, 2008 meeting minutes, the following items were discussed:

1. *Division Lettings*

   Mr. Robinson reported that he is working with the division contract officers to explore ways to avail Division let project plans via the internet. He added that this issue will be discussed with the Chief Engineer. Mr. Robinson also stated that there is some discussion on streamlining the bid process for Division let projects.

2. *Screed Loads on Partially Cured Decks*

   Mr. Lambert reported that Structure Design has completed a preliminary review of the calculations to support the request to allow Contractors more flexibility when moving screeds during deck pours. He added that Structure Design and Construction will meet to discuss revisions to the Standard Specifications.

3. *Contract Start Times*

   Ms. Samples discussed the process that the Contract Time Committee employs when contract times and start dates are determined. Contract times and start dates are determined on a case-by-case basis during the field inspection and require concurrence by the Division. Numerous factors are considered, which include moratoriums, project urgency, procurement and delivery, and scheduling of the Department's personnel.

   Contractors agreed that the discussion had given them a better understanding of the process for determining contract times and start dates. They reiterated their preference for floating start times and suggested allowing more time between pre-construction meetings and start dates.

4. *Temporary Bridges*

   Mr. Robinson stated that temporary bridge lengths need to be discussed at the field inspection.

The minutes of the April 16th, 2008 meeting were approved.

The following items of new business were discussed:

1. *Railroad Flagging*

   Mr. Raynor reported that the efforts to reduce railroad flagging costs continue to be a priority. He added that a special provision for railroad flagging had been developed, and that is was distributed to Contractors for their review and comments. Contractors generally suggested using Intermediate Contract Times (ICTs).

   Mr. Raynor stated that the Department would like to see more Contractor accountability for controlling flagging costs. He distributed a special provision that has been used on a project. This provision stipulates incentives and liquidated damages for railroad flagging. He added that the provision will be included in future projects, and will be modified as necessary.

2. *Batter on End Bent Piles*

   Mr. Gattis stated that in the field it is difficult to obtain the batter shown in the plans for end bent brace piles. He suggested that Structure Design check end bent designs for sensitivity to the specified batter.

   Structure Design stated that they will look into the suggestion.

3. *Temperature Effects of Fly Ash in Class AA Concrete*

   Mr. Gattis stated that use of fly ash in class AA concrete may inhibit development of the heat of hydration, thereby affecting the development of concrete strength. He added that fly ash is typically used in high performance concrete (HPC) and a 56 day or 90 day strength requirement is recommended.

   There was some discussion on the Department's use of fly ash in concrete, which is primarily used to reduce concrete chloride permeability and not to develop other HPC characteristics.

   Contractors also inquired why they need approval to use some approved admixtures, such as retarders similar to Delvo. The discussion noted that the Department has approved use of concrete admixtures at certain dosage levels. Therefore, when a Contractor would like to use an admixture at a higher dosage level approved is required.

   The discussion also noted that the FHWA expressed concerns about some of the deck curing practices that were observed during the 2008 Spring Field Review. As a result the FHWA will be initiating a deck pouring and curing process review.

4. *Temporary Piers for Work Bridges and Temporary Detour Bridges*

   Mr. White described a project where use of a spread footing to support temporary bent was not approved. He explained that the special provisions did not disallow a spread footing. He also noted that the special provisions do not state how many bents or mats are permitted.

   Mr. White recommended that the special provisions need to be definitive on some matters, but also allow Contractors the flexibility to innovate means and methods for construction.

The discussion briefly explained the predetermined areas that are anticipated to sustain some environmental impacts, and the Department's commitments to keep construction work within those defined areas.

Contractors were also reminded that temporary bridges require an HS-25 design load and may require a TL-2 or TL-3 bridge railing. It was noted that the design load for a TL-3 rail is significantly more than the design load previously required by the *AASHTO Standard Specifications*.

5. *Staged Construction Formwork*

   Mr. Robinson discussed problems with meeting the rideability specifications when on a staged construction bridge the Contractor supports the formwork for stage II on the completed stage I. He stated that the Department needs to explicitly require screed supports for stage II deck pours to be independent of stage I.

   Contractors discussed the challenges they face with the standard closure pour width between stages. They stated that a minimum 6'-0" wide bay spacing would be required to construct both stages independently when using the standard overhang brackets.

   Structure Design and Construction stated that a wider closure pour is not desirable. Contractors were encouraged to ensure that a hinge is developed at all points where the formwork for stage II is supported on stage I, and that screeds are fully supported on the stage II exterior girders.

6. *Anchored Temporary Shoring and Temporary Soil Nail Walls*

   Mr. Hidden discussed Contractor feedback on the draft special provision for *Anchored Temporary Shoring*. In general, Contractors felt that alternate shoring methods were not included in the revised special provision. Mr. Hidden stated that he would add verbiage to the provision to allow other types of anchorages.

7. *Crane Access for Integral Abutments*

   Mr. Hanks sought Contractors' ideas on methods to improve crane access for integral abutment bridges. He noted that Contractors have been encouraged to submit their preferred method for crane access for approval, but to date no Contractor has made a submittal.

   Mr. Hanks reiterated that the Department is unable to develop a standard method for crane access because crane loads are unknown and can vary considerably depending on the type of crane a Contractor chooses to use. He added that in the interest of making some progress on this recurring issue, Structure Design will let a couple of trial projects requiring the Contractor to submit a design for a temporary fabric wall which will remain in place and serve as the approach fill. Based on these trial projects, Structure Design will standardize the temporary fabric wall and allow its use at the Contractor's option on future projects.

8. *Next Meeting*

   The next meeting is scheduled for Wednesday, August 13th, 2008 in Structure Design Conference Room C.